

Ser. No. 10/659,653  
Amdt. dated October 24, 2006  
Reply to Office Action of April 25, 2006

PF020108

Remarks/Arguments

35 U.S.C. §102

Claims 1-5 stand rejected under 35 U.S.C. §102(c) as being anticipated by Kundu et al (US 6,621,381B1). It is submitted that the amended claim 1 is not anticipated by Kundu et al. because it does not disclose, teach or suggest a dielectric resonator antenna "wherein said block of dielectric resonator comprises a third face being at least partially unbounded by conductive material so as to emit radiation from said third face" as recited by the currently amended claim 1.

The present invention teaches a dielectric resonant antenna constituted by a block of dielectric such as ceramic that radiates per se. The DRA is fed through a slot via a microstrip line. (page 4, lines 36-37) The DRA will resonate at certain frequencies, depending on the dimensions of the dielectric block and the specific permittivity of the dielectric. The DRA emits radiation from the third face. DRAs have numerous advantages over microstrip antennas, such as smaller size and inherently low loss at resonant frequencies.

It is submitted that Kundu does not teach or remotely suggest the solution recited by the currently amended claim 1. Kundu teaches a dielectric resonator that operates in the TEM mode. The embodiments of the dielectric resonator in Kundu teach a voltage controlled oscillator, or a resonant filter. Kundu teaches methods of reducing radiation loss, as these embodiments require that as little energy is radiated from the device as possible. Therefore, Kundu teaches an apparatus which tries to eliminate radiation, while the present invention teaches a system which optimizes radiation.

It is submitted that the amended claim 1 is not anticipated by Kundu et al. because it does not disclose, teach or suggest a "Dielectric resonator antenna comprising a single block of dielectric material of specific permittivity" "having a first face intended to be mounted on earth plane and covered with a first metallic layer, wherein at least one second face perpendicular to the first face is covered with a second metallic layer contacting said metallic layer covering said first face" as recited by the currently amended claim 1.

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35 U.S.C. §103

Claims 6-9 stand rejected under 35 USC 103(a) as being unpatentable over Kundu (US6621381) in view of Adahi et al (US6198450). It is submitted that neither Kundu, nor Adahi teach or suggest a dielectric resonator antenna having a "third face being at least partially unbounded by conductive material so as to emit radiation from said third face" as recited by the currently amended claim 6.

Kundu does not teach the solution recited by the currently amended claim 6 as was illustrated previously in this response. Asahi teaches a method of feeding a DRA, but does not teach or suggest a dielectric resonator antenna being partially unbounded by conductive material so as to emit radiation from said third face. Since neither Kundu or Adahi teach or suggest a DRA "having a first face intended to be mounted on earth plane and covered with a first metallic layer, wherein at least one second face perpendicular to the first face is covered with a second metallic layer contacting said metallic layer covering said first face" as recited by the currently amended claim 6, it is submitted that claim 6 is allowable in light of Kundu or Adahi.

In light of the above arguments and amendments, it is submitted that claim 6 is allowable over Herve, Kundu, and Adahi, and any combination thereof. Such action is respectfully requested.

Since claims 2-5 and 7-9 are dependant from allowable claims 1 and 6, it is submitted that they are allowable for at least the same reasons that claims 1 and 6 are allowable. Such action is respectfully requested.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

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The fee for a three month extension of time is due. Please charge the extension fees pursuant to § 1.136(a)(3) of \$1020.00 to Deposit Account 07-0832. No addition fee is believed due. However, if any additional fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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October 23, 2006